WE CLAIM:

1. A color correction circuit having at least three color input channel processing circuits, each of said color input channel processing circuits comprising:

an adder with a corrected color channel output and an uncorrected color channel input;

a noise reduction filter having a filter input coupled to said uncorrected color channel input;

an input channel multiplier having an input coupled to an output of said noise reduction filter, an output of said input channel multiplier being coupled to an input of said adder; and

at least two further multipliers with inputs respectively coupled to outputs of other noise reduction filters forming part of the other color input channel processing circuits, said two further multipliers having outputs coupled to inputs of said adder.

2. A color correction circuit as claimed in claim 1, wherein said multipliers for a color channel have coefficients that when summed together are less than 0.2.

3. A color correction circuit as claimed in claim 1 wherein said coefficients for a color channel when summed together are substantially zero.

4. A color correction circuit as claimed in claim 1, wherein all said coefficient are less than 1.

5. A color correction circuit as claimed in claim 1 wherein said noise reduction filter is a Low Pass Filter.

6. A camera having at least three color input channel processing circuits, each of said color input channel processing circuits comprising:

an adder with a corrected color channel output and an uncorrected color channel input;

a noise reduction filter having a filter input coupled to said uncorrected color channel input;

an input channel multiplier having an input coupled to an output of said noise reduction filter, an output of said input channel multiplier being coupled to an input of said adder; and

at least two further multipliers with inputs respectively coupled to outputs of other noise reduction filters forming part of the other color input channel processing circuits, said two further multipliers having outputs coupled to inputs of said adder.

7. A camera as claimed in claim 6, wherein there is comprise a color interpolation module coupled to said color input channel processing circuits.

8. A camera as claimed in claim 7, wherein there is a gamma correction module coupled to said color interpolation module.

9. A method of correcting a digital color sampled signal comprising at least three color channels, the channels being a Red Channel, Green Channel and Blue channel, the method comprising the steps of:

filtering uncorrected color sampled signals on each of said color channels to provide filtered channel sampled signals;

multiplying said filtered channel sampled signals with selected coefficients to provide noise reduced signal samples of said uncorrected color sampled signals; and

adding each of said uncorrected color sampled signals to selected said noise reduced signal samples to provide a corrected color sampled signal.

10. A method of correcting a digital color sampled signal as claimed in claim 9, wherein the coefficients for each said channel when summed together are less than 0.2.

11. A method of correcting a digital color sampled signal as claimed in claim 9, wherein said coefficients for each said channel when summed together are substantially zero.

12. A method of correcting a digital color sampled signal as claimed in claim 9, said method being further characterised by performing the following expression:

$$\begin{bmatrix} R_c \\ G_c \\ B_c \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} R \\ G \\ B \end{bmatrix} + \begin{bmatrix} c_{11} & c_{12} & c_{13} \\ c_{21} & c_{22} & c_{23} \\ c_{31} & c_{32} & c_{33} \end{bmatrix} \begin{bmatrix} \overline{R} \\ \overline{G} \\ \overline{B} \end{bmatrix}$$

Wherein, R_C, G_C and B_C are respective color corrected samples of the uncorrected color sampled signals R,G,B; $\overline{R}, \overline{G}, \overline{B}$ are respective filtered channel sampled signals of the uncorrected color sampled signals R,G,B; and C_{11} to C_{33} are the coefficients with values less then 1.

13. A method of correcting a digital color sampled signal as claimed in claim 12, wherein the coefficients C_{11}, C_{22} and C_{33} are positive.